

REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application.

Disposition of Claims

Claims 1-34 were pending in the present application. By way of this reply, claims 2-4, 6-10, 15, 17-19, 21-25, and 27-34 have been cancelled. Accordingly, claims 1, 5, 11-14, 16, 20, and 26 are now pending in the present application. Claims 1, 11-14, and 16 are independent claims. Claim 5 is dependent directly from claim 1. Claims 20 and 26 are dependent directly from claim 16.

Amendments to the Claims

Claims 1, 11-14, and 16 have been amended to more precisely recite the present invention. Claims 1, 11-14, and 16 were amended to clarify that the intelligent interconnecting device is connected to a LAN trunk line, and that the external apparatus by which the intelligent interconnecting device is controllable is also connected to a LAN trunk line. Support for this can be found, for example, in Figure 1. Claim 1 has also been amended to incorporate the limitations of claims 2-4. Further, a limitation of judging whether access from an external apparatus is a first access was added. Support for this can be found, for example, in Figure 3.

Claim 13 was amended to incorporate the limitation of claim 15. Claim 16 was amended to incorporate the limitations of claim 17-19. No new matter has been added by the amendments.

Rejections Under 35 U.S.C. § 112

Claims 9, 10, 15, and 25 were rejected under 35 U.S.C. § 112 as being indefinite. By way of this reply, claims 9, 10, 15, and 25 have been canceled. Amended claim 13 has incorporated the limitation of claim 15, but has been reworded to clarify a limitation. Specifically, the added limitation in the claim has been reworded to clarify that notification is sent to a predetermined managing computer, while the external apparatus as recited in the added limitation is the "apparatus not to be responded to." A predetermined managing computer cannot be the "apparatus not to be responded to" because it would make no sense to designate a computer with an unauthenticated address to be the predetermined managing computer.

Rejections Under 35 U.S.C. § 102

Claims 1, 3, 5-7, 9, 11, 12, 14, 16, 18, 20-22, 24, 26, 28-31, and 33 were rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,205,156. The Applicant assumes that the Examiner meant U.S. Patent No. 6,202,156 ("Kalajan"), which was listed under Examiner's cited references. By way of this reply, claims 3, 6, 7, 9, 18, 21, 22, 24, 28-31, and 33 have been canceled. Claims 1, 11, 12, 14, and 16 have been amended to clarify the recited invention. To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Claim 1 as amended requires, in part, “an intelligent interconnecting device connected to a LAN trunk line having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus connected to the LAN trunk line based on a TCP/IP protocol.”

This limitation is clearly not shown in Kalajan. As recited in the claim, the intelligent interconnecting device must be controllable by an external apparatus connected to the LAN trunk line. In fact, Kalajan does not disclose the client validation system 46 being controllable, and only mentions that software 310 on the server 40 can control the length of time the access-controlled communications path is maintained, and control the disposition of packets received from unvalidated clients. (*See* line 57 of column 6 - line 4 of column 7 in Kalajan) This limitation is important because it emphasizes an important distinction between the present invention and Kalajan; namely, that Kalajan is aimed towards avoiding the receipt of unauthorized packets, wherein the present invention is aimed towards avoiding unauthorized access to an intelligent interconnecting device which depends on TCP/IP protocol.

Claim 1 as amended also requires, in part, “when an access from the external apparatus is authenticated through execution of the TCP/IP protocol, judging whether the access from the external apparatus is the first access,” “if judged to be the first access, extracting and storing a source IP address included in a packet which is transmitted from an external apparatus,” and “permitting communication thereafter between the external apparatus having the source IP address identical with the stored transmitting end IP address and the intelligent interconnecting device only when the source IP address of the external apparatus is judged to be identical with the stored source IP address.”

The above limitations allow continuous access once the source IP address is stored at first access. Kalajan fails to show the determination of first access, and thus the validation must occur at every access. In contrast, the present invention allows quick access as long as the access is occurring from a validated source IP address. The Examiner cites lines 33-41 of column 4 in Kalajan as showing the third of the above limitations. However, the cited passage, as well as the remainder of Kalajan, fails to teach or suggest the limitation. The claim limitation allows communication between the external apparatus and the *intelligent interconnecting device* only when the source IP address and the stored source IP address are identical. In contrast, the cited passage states that the firewall 48 allows only data packets from validated network addresses to pass through to access-controlled *port*. A port can hardly be considered an intelligent interconnecting device.

Further, as amended, claim 1 requires, in part, “registering the source IP address of the external apparatus which is judged to be nonidentical in an unauthorized access IP list and notifying an authenticated managing computer of the source IP address of the external apparatus which is judged to be nonidentical when the source IP address is judged to be nonidentical with the stored source IP address.”

At least this limitation is also clearly not disclosed by Kalajan. The unauthorized access IP list is useful in that if the source IP address is determined to be of an external apparatus not to be responded to, any subsequent access from the external apparatus with this source IP address can be denied without having to go through the authentication operation again. The Examiner admits that Kalajan does not disclose that the server contains a list of block source IP addresses. (See lines 23-24 on page 15 of the Office Action) Thus, the registering a source IP address in an unauthorized access IP list is not and cannot be disclosed by Kalajan. Thus, claim 1 is

patentable over Kalajan, at least for the above reasons. Claim 5 is dependent from claim 1. Thus, claim 5 is patentable over Kalajan, at least for the same reasons as claim 1.

Claims 11, 12, and 14 require, in part, “an intelligent interconnecting device connected to a LAN trunk line having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus connected to the LAN trunk line based on a TCP/IP protocol.”

As discussed above with respect to claim 1, this limitation is not shown by Kalajan.

Additionally, as amended, claims 11, 12, and 14 require, in part, “a first step of causing the intelligent interconnecting device to judge whether or not a first access to the intelligent interconnecting device from outside has occurred” and “a fourth step of determining an authenticated external apparatus as an apparatus to be responded to thereafter by the intelligent interconnecting device and causing the intelligent interconnecting device to judge whether or not this access is the first access, when it is judged in the third step that the authentication is given.”

The Examiner cites line 64 of column 3 through line 4 of column 4 in Kalajan as showing these limitations. However, there is nothing in the cited passage regarding judging whether an access is the first access. “First client” as recited in the passage only identifies the client (i.e., client one). The passage, as well as the rest of Kalajan, are completely silent regarding judging whether the access is a first access or a subsequent access. Thus, claims 11, 12, and 14 are patentable over Kalajan, at least for the above reasons.

As amended, claim 16 requires, in part, “an intelligent interconnecting device connected to a LAN trunk line having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus connected to the LAN trunk line based on a TCP/IP protocol.”

As discussed above with respect to claim 1, this limitation is not shown by Kalajan.

Additionally, as amended, claim 16 requires, in part, “when the source IP address is judged to be nonidentical with the stored source IP address, said central controlling section registers the source IP address which is judged to be nonidentical with the stored source IP address in an unauthorized access IP list and said controlling section notifies an authenticated managing computer of the source IP address which is judged to be nonidentical with the stored source IP address.”

At least this limitation is also clearly not disclosed by Kalajan. The Examiner admits that Kalajan does not disclose that the server contains a list of block source IP addresses. (*See* lines 23-24 on page 15 of the Office Action) Thus, the registering a source IP address which is judged to be nonidentical with the stored source IP address in an unauthorized access IP list is not and cannot be disclosed by Kalajan. Kalajan is also silent regarding an authenticated managing computer of the source IP address which is judged to be nonidentical with the stored source IP address. In fact, Kalajan is silent regarding a managing computer, because the access control is done entirely within the server by the client validation system 46 and the firewall 48. (*See* Figure 1 in Kalajan) Thus, claim 16 is patentable over Kalajan, at least for the above reasons. Claims 20 and 26 are dependent from claim 16. Thus, claims 20 and 26 are patentable over Kalajan, at least for the same reasons as claim 16.

Accordingly, withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 2, 4, 8, 10, 13, 15, 17, 19, 23, 25, 27, 32, and 34 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,205,156 in view of U.S. Patent No. 6,832,

321 (“Barrett”). Again, the Applicant assumes that the Examiner meant U.S. Patent No. 6,202,156 (“Kalajan”), which was listed under Examiner’s cited references. By way of this reply, claims 2, 4, 8, 10, 15, 17, 19, 23, 25, 27, 32, and 34 have been canceled. Claim 13 has been amended to clarify the recited invention. To the extent that this rejection may still apply to the amended claim, this rejection is respectfully traversed. Claim 1 has incorporated limitations from rejected claims 2 and 4, and claim 16 has incorporated limitations from rejected claims 17-19. Claim 5 is dependent from claim 1, and claims 20 and 26 are dependent from claim 16.

As explained above, the claims are patentable over Kalajan. Barrett is only relied upon to provide a list of block source IP addresses (*See* lines 23-24 on page 15 of the Office Action). Barrett fails to disclose all of the limitations of the claims, and fails to supply that which Kalajan lacks.

As amended, claim 1 requires, in part, “registering the source IP address of the external apparatus which is judged to be nonidentical in an unauthorized access IP list and notifying an authenticated managing computer of the source IP address of the external apparatus which is judged to be nonidentical when the source IP address is judged to be nonidentical with the stored source IP address.”

Even though Barrett does mention a list of block source IP addresses, Barrett does not show or suggest notifying an authenticated managing computer of the source IP address of the external apparatus which is judged to be nonidentical. Thus, claim 1 is patentable over Kalajan and Barrett, whether considered separately or in combination, at least for the above reasons. Claim 5 is dependent from claim 1. Thus, claim 5 is patentable over Kalajan and Barrett, at least for the same reasons as claim 1.

Claims 13 as amended requires, in part, “an intelligent interconnecting device connected to a LAN trunk line having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus connected to the LAN trunk line based on a TCP/IP protocol.”

As discussed above for claim 1, this limitation is not shown or suggested by Kalajan. Barrett is also silent regarding an intelligent interconnecting device connected to a LAN trunk line being structured to be *controllable by an external apparatus* connected to the LAN trunk line based on a TCP/IP protocol.

Additionally, claim 13 requires, in part, “a first step of causing the intelligent interconnecting device to judge whether or not a first access to the intelligent interconnecting device from outside has occurred” and “a fourth step of determining an authenticated external apparatus as an apparatus to be responded to thereafter by the intelligent interconnecting device and causing the intelligent interconnecting device to judge whether or not this access is the first access, when it is judged in the third step that the authentication is given.”

As discussed for claim 11, 12, and 14, these limitations are not shown or suggested by Kalajan. Barrett also fails to show or suggest judging whether the access is a first access or a subsequent access.

Further, as amended, claim 13 requires, in part, “an eleventh step of notifying a predetermined managing computer the source IP address of the external apparatus determined in the tenth step as the apparatus not to be responded to.”

Kalajan and Barrett fail to show or suggest sending “the source IP address of the external apparatus not to be responded to” to a predetermined managing computer, as required by the

claim. Thus, claim 13 is patentable over Kalajan and Barrett, whether considered separately or in combination, at least for the above reasons.

As explained above, claim 16 is patentable over Kalajan. Barrett is only relied upon to provide a list of block source IP addresses (*See* lines 23-24 on page 15 of the Office Action). Thus, Barrett is silent regarding the other limitations which Kalajan lacks. Further, Barrett only provides the first half of the limitation in claim 16 regarding the list of block source IP addresses.

As amended, claim 16 requires, in part, “when the source IP address is judged to be nonidentical with the stored source IP address, said central controlling section registers the source IP address which is judged to be nonidentical with the stored source IP address in an unauthorized access IP list and said controlling section notifies an authenticated managing computer of the source IP address which is judged to be nonidentical with the stored source IP address.”

Even though Barrett does mention a list of block source IP addresses, Barrett does not show or suggest the controlling section notifying an authenticated managing computer of the source IP address which is judged to be nonidentical with the stored source IP address. Thus, claim 16 is patentable over Kalajan and Barrett, whether considered separately or in combination, at least for the above reasons. Claims 20 and 26 are dependent from claim 16. Thus, claims 20 and 26 are patentable over Kalajan and Barrett, at least for the same reasons as claim 16.


Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply to be responsive to all outstanding issues and places the application in condition for allowance. If this belief is incorrect, or any other issues arise, do not hesitate to contact the undersigned or his associates at the telephone number listed below. Favorable action in the form of a Notice of Allowance is respectfully requested. Please apply any charges not covered, or any credits, to Deposit Account No. 50-0591, under Order No. 04610/004001 from which the undersigned is authorized to draw.

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